

Notice of Allowability

Application No.

10/821,057

Applicant(s)

JENSEN, HENRIK T.

Examiner

Blane J. Jackson

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 15 October 2007.
2. ☒ The allowed claim(s) is/are 1,3,5-8,10-17,19,21 and 22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

OFFICE ACTION

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James A. Harrison, Reg. No. 40,401 on 24 October 2007.

The application has been amended as follows:

With respect to claim 1, at the end of the last sentence ". . . constant amplification of the in-phase signal component" add - - of the digital information signal that are summed with the quadrature phase signal component of the digital information signal to produce a quadrature portion of the pre-compensated digital information signal that is phase compensated. - . This amendment clarifies the quadrature phase signal component is summed with the amplified in-phase component of the digital information signal to produce a phase compensated quadrature portion of the pre-compensated digital information signal.

With respect to claim 5, -- 4 -- is deleted and -- 1 -- is inserted. This change corrects for proper claim dependency.

Allowable Subject Matter

Claims 1, 3, 5-8, 10-17, 19, 21 and 22 are allowed.

The following is an examiner's statement of reasons for allowance:

As to claim 1, the prior art made of record teaches a radio transmitter within a radio transceiver comprising a digital modulator that compensates the digital information signal to produce a pre-compensated digital information signal that is pre-compensated for phase and magnitude imbalance but does not teach a modulator that provides the combination of elements including a digital modulator includes a second part of the two-part amplification logic further includes a plurality of selectable amplification modules to provide selectable amounts of constant amplification of the in-phase signal component of the digital information signal that are summed with the quadrature phase signal component of the digital information signal to produce a quadrature portion of the pre-compensated digital information signal that is phase compensated.

As to claim 17, the prior art teaches a radio receiver comprising a digital de-modulator and compensates a quadrature digital signal to produce a compensated digital information signal that is compensated for phase and magnitude imbalance but does not teach a de-modulator that comprises the combination of elements including a digital de-modulator including an adder to sum the amplified in-going phase digital signal and the in-going amplified quadrature phase digital signal to compensate the in-going in-phase digital signal to produce a compensated digital information signal that is compensated for phase and magnitude imbalance wherein a second of a two part

Art Unit: 2618

amplification logic includes a plurality of selectable amplification modules to provide selectable amounts of constant amplification of the quadrature phase signal component.

As to claim 19, the prior art made of record teaches a method for producing an integrated circuit radio transceiver comprising determining an I and Q phase and gain imbalance compensation amount by adjusting one of the in-phase amplification constant or phase amplification constant but does not teach the specific steps of adjusting the amplification constant of the previous step by a second step size wherein the second step size is substantially greater than the first step size and repeating the adjustment steps M times wherein M is equal to a number of selectable amplification adjustments to one of the in-phase amplitude amplification constant or the phase amplification constant.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Additional prior art made of record and not relied upon but considered pertinent to applicant's disclosure includes Zheng (US 6,892,060).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blane J. Jackson whose telephone number is (571) 272-

Art Unit: 2618

7890. The examiner can normally be reached on Monday through Thursday, 7:30 AM-6:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Edward J. Urban". The signature is fluid and cursive, with the first name "Edward" and last name "Urban" being clearly distinguishable.